COLLIDER-ACCELERATOR DEPARTMENT

Title: Environmental Management Program for Beam Line Construction & Disassembly

Prepared by: E. Lessard

Group: Chairman's Office

Approvals

Signature on File _____ Date: _____

ESH&Q Division Head

Signature on File _____ Date: _____

Collider-Accelerator Department Chairman

(Indicate additional signatures)

Y	N		
☐	x	FS Representative: _____	Date: _____
☐	x	Radiological Control Coordinator: _____	Date: _____
☐	x	Chief ME: _____	Date: _____
☐	x	Chief EE: _____	Date: _____
x	☐	Environmental/P2 Coordinator: *Signature on File*	Date: _____
☐	x	QA Manager: _____	Date: _____
☐	x	Other: _____	Date: _____

ENVIRONMENTAL MANAGEMENT PROGRAM C-A Beamline Construction/Disassembly, PEP ID# AGS-002-EBC	**Completed by:** E. Lessard **Date:** February 27, 2004

1. Significant Aspects: (see table of "Criteria for Significant Aspects" for description of letter designation)

- Hazardous Waste (a)
- Regulated Industrial Waste (a)
- Radioactive Waste (a)
- Mixed Waste (a)

2. **Department-wide Objective(s):**

A. COMPLIANCE – (b) Implement Corrective Actions to Achieve Article 12 Conformance (EWMSD Environmental Objectives & Targets FY2004, Sect. 2[b])

B. COMPLIANCE – (d) Meet Federal and State Air Program Requirements including reducing the use of (and eventual phase out of) Ozone Depleting Substances (ODS) (EWMSD Environmental Objectives & Targets FY2004, Sect. 2[d])

C. COMPLIANCE – (e) Schedule and conduct regulatory compliance assessments to evaluate compliance to applicable regulations on a three-year cycle (EWMSD Environmental Objectives & Targets FY2004, Sect. 2[e])

D. POLLUTION PREVENTION – (a) Integrate pollution prevention (P2) into the work planning processes to reduce generation of hazardous, mixed, and low-level radioactive routine waste streams (FY04 Critical Outcome, Appendix B, 3.4.3, Pollution Prevention; EWMSD Environmental Objectives & Targets FY2004, Sect. 3[a])

E. POLLUTION PREVENTION – (b) Integrate pollution prevention (P2) to evaluate and implement pollution prevention opportunities. Expand awareness and involvement in the BNL P2 Program (FY04 Critical Outcome, Appendix B, 3.4.3, Pollution Prevention; EWMSD Environmental Objectives & Targets FY2004, Sect. 3[b])

F. POLLUTION PREVENTION – (c) Reduce or prevent generation of non-routine waste, including spills (FY04 Critical Outcome, Appendix B, 3.4.3, Pollution Prevention; EWMSD Environmental Objectives & Targets FY2004, Sect. 3[c])

G. GROUNDWATER PROTECTION - Fully implement groundwater protection program. Protect groundwater quality from further chemical and radiological releases, and remediate existing contaminated groundwater in a cost-effective and practical manner (EWMSD Environmental Objectives & Targets FY2004, Sect. 5)

3. Department-wide Target(s):

A. Implement all FY03 compliance assessment corrective /preventative actions (from both the Storage Tanks and Spills Assessments) under your control that were developed as a result of the programmatic self-assessment of the subject area, Storage and Transfer of Hazardous and Nonhazardous Materials

B. By March 31, 2004, involve Environmental Compliance Representatives (ECRs) in review of applicable Clean Air Act regulatory requirements for those emission units, processes, and emission sources covered by BNL's Title V permit to ensure that compliance assurance documentation is

consistent with recommendations offered in the Facility Use Agreement environmental database on the web at http://intranet.bnl.gov/esh/esd/FUA_Data.htm

C. (1) Participate in the Liquid Effluent audit scheduled for the second quarter 2004. (2) Participate in the programmatic assessment of Document Control to be conducted by the Quality Management Office by February 2004. (3) Participate in the RCRA subject area assessment planned for Sept. 30, 2004.

D. (1) Analyze all waste generating activities for pollution prevention and track volume of wastes diverted and cost savings realized through P2 methods. (2) Review all experiments in accordance with the Work Planning requirements, including consideration of pollution prevention opportunities

E. Submit a minimum of two pollution prevention project proposals by December 15, 2003, or two success stories, or two lessons learned to the P2 Program Manager by September 15, 2004

F. (1) Reduce spill response costs by ~$30,000 through education on proper remediation of Subject Area allowed spill clean-up. This would represent ~ 50% reduction in costs associated with the reporting of minor spills. Reduce the average release volume of reportable spills by 10% through improved operator "tools" & response. (2) Develop a plan for the reduction of PCB carrying devices by 12/15/04. (3) Monitor waste generation rates for non-routine waste streams and report to line management on a quarterly basis

G. Zero impact on groundwater quality from current operations, this will be measured by the number of confirmed impacts to groundwater quality resulting from current operations

4. Department-wide Environmental Performance Indicator(s):

- Tier I inspection results
- Number of SPDES Permit exceedences by C-A as reported by BNL EWMSD
- P2 projects, success stories, and lessons learned that are submitted to BNL P2 Council
- Number of significant spills at C-A facilities
- Volume/weight of routine wastes sent to BNL Waste Management Division
- Completion of tasks listed in Section 10

5. Department-wide Program Description:

Departmental self-assessment program, Tier I inspections, and annual compliance reviews by the C-A ESHQ Division ECR shall meet EWMSD Environmental Objectives & Targets FY2004. Tracking and trending waste generation and waste recycling as well as on time regulatory reporting shall contribute towards achieving EWMSD Environmental Objectives & Targets FY2004. Submitting pollution prevention projects, success stories or lessons learned shall contribute towards achieving FY04 Critical Outcome/Objective 3.4.3 Pollution Prevention. The minimization of wastes, prevention of spills and meeting SPDES permit limits shall also help satisfy the overall contract Objective 3.4, Improved ESH&Q.

A list of "Unfunded Environmental Liabilities" was drafted by Laboratory staff and reviewed with the DOE. The Department shall help further identify legacy issues in a comprehensive manner. Many of the issues identified in the draft list pose regulatory (e.g., storage of wastes for periods >1 year), environmental (e.g., contaminated media), and social risks to BNL. The C-A Department shall actively find a path forward to better define the scope and priority of the issues and seek/identify funding resources to implement cleanup. This effort shall contribute towards achieving FY04 Critical Outcome/Objective 3.4.1 Legacy Risk Management.

6. **Potential Environmental Impact(s):**

Hazardous, industrial or radioactive waste mismanagement could contaminate the environment and incur RCRA or local regulatory agency penalties.

7. Legal and Other Requirements in SBMS Subject Areas:

- Radioactive Waste Management
- Hazardous Waste Management
- Oil/PCB Management
- Pollution Prevention

8. Operational Controls: See Operational Controls Form

9. Budget:

- Operating Budget
- HEP funds for legacy materials.

10. Structure, Authorities, Responsibilities

Tasks	Person Responsible	Completion Dates
A. The C-A ECR and Environmental Coordinator shall implement all FY'03 corrective actions from the Storage and Transfer of Hazardous and Non-hazardous Materials SA assessment and maintain SA tank posting requirements	C-A ECR & Environmental Coordinator	07/04
B. The C-A ECR shall review all emission points for compliance, documentation, and forward any updates to the ESD Subject Matter Expert	C-A ECR	03/04
C. Facilitate and participate in applicable assessments Liquid Effluents, RCRA, & Document Control) and complete Compliance Assessment Cards in accordance with the Environmental Assessments SA	C-A ECR – Liquid Effluents RCRA C-A QA Manager – Document Control	03/04 09/04 02/04

D. (1) Maintain records and report progress against waste goals and, where appropriate, suggest P2 opportunities (2) Review all experiments and routine operations, as a member of the ESRC and ASSRC, to recommend pollution prevention opportunities/alternate waste disposal paths	C-A Environmental Coordinator C-A ECR	Quarterly Ongoing
E. The C-A ECR shall facilitate the submission of a P2 proposal for the NSRL digital camera, and success stories for: (1) The reduction of 2 MW power by tuning of the RHIC refrigeration system (save $2400/day or 48 MW-hr/day) (2) The reduction of 2 MW power in ATR while RHIC is on store (assume off for 2/3/ of a day saves $1600/day or 32 MW-hr/day)	(1) C-A ECR (2) C-A ECR	12/03 9/04
F. (1) Semi-annually distribute information on spill kits/materials and subject area requirements on spill clean-up and reportability. Track and report on C-A Spill costs (2) Submit ADS funding request for PCB's and track request. through to the final disposition (3) The C-A Environmental Coordinator shall prepare and submit quarterly reports that track non-routine waste amounts and costs for disposal	(1) ECR (2) ESHQ Division Head (3) C-A Environmental Coordinator	Semi-annually 06/04 Quarterly
G. Track the number of unusual or off normal events associated with groundwater impacts in current operations	C-A ESHQ Division Head	Semi-annually
H. Submit a Field Work Proposal to address the clean-up of legacy materials due to prior High Energy Physics operations.	C-A Associate Chair for ESHQ	02/04